To think of interdisciplinarity as intercurrence

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To think of interdisciplinarity as intercurrence: Or, working as an interdisciplinary team to develop an ML tool to tackle online gender-based violence and hate speech

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Abstract:

The paper reflects on the working of an interdisciplinary team consisting of researchers and activists from the field of computer science and social sciences involved in developing a user-facing, browser plug-in to detect and moderate instances of online gender-based violence, hate speech and harassment in Hindi, Indian English, and Tamil. There have been multiple calls within the field of Human-Computer Interaction (HCI) to include qualitative methods in one's research design. These calls, while attuned to the importance of qualitative methods for HCI, ignore the intercurrent nature of different research methods, disciplines and practices. The paper borrows the concept of intercurrence from Orren & Skowronek (1996) and reorients it to explicate the practice of interdisciplinary research. It argues that intercurrence i.e. (in between, an occurrence within an occurrence) is a useful image to perceive interdisciplinarity wherein we argue that at any given point, an interdisciplinary team navigates multiple, yet simultaneously occurring temporal dimensions of differently disciplined bodies. An awareness of these multiple temporalities adds another dimension to thinking about conflicts and possibilities emerging from interdisciplinary practices and reorients interdisciplinary research towards unexpected outcomes.

Keywords

interdisciplinarity; intercurrence; machine learning; gender-based violence; temporalities

I INTRODUCTION

> "Different disciplines have different epistemic orientations. Some disciplines are concerned with the question of – why must this ship move at all?"

The above-quoted lines were written by one of the authors of this paper as part of a writing exercise to map one's experience of working in an interdisciplinary team. While noting the necessity of a

'cross-disciplinary' team to guard against the "risks of techno-positivist approaches", the fellow author reflected upon the problem of *othering*, noting that,

> "In absence of curiosity, the other group is homogenized. 'They all' do something. Everything that isn't in our domain is in theirs."

as well as the importance of translation while being cognizant of disciplinary hierarchies,

> "For interdisciplinary collaborations to be effective people have to pick up at least some of each other's jargon [but] this translation task is especially tricky when there are perceived power hierarchies within disciplines."

Taking this detour, the diary entry stops at the "different epistemic orientations" of different disciplines. Having noted this difference, the entry quickly ends with one final, perverse observation, "… wouldn't it be easier if everyone could just use the same tools for communication and documentation? X-D".

The paper aims to stay with the predicament that is expressed in these two observations – of the fellow team member's recognition of the absolute *difference* between each discipline's "epistemic orientation" and their immediate need to end the diary entry with an almost wicked desire to have the "same tools for communication… X-D". We call it wicked/perverse to mark how the desire to standardize and homogenize returns immediately after recognizing the limits of 'cross-disciplinary' work in the face of different epistemic orientations.

The two of us were part of a larger interdisciplinary team that was involved in the development of a user-facing, browser-based web plug-in[1]. The first iteration of the tool used both machine learning (ML) as well as non-machine learning approaches to detect hateful and abusive content targeting persons of marginalized gender situated at the intersections of caste, religion, and sexuality. The first iteration of the tool was designed to work on three Indian languages: Hindi, Indian English, and Tamil.

The machine learning model behind the tool was inspired by bottom-up approaches in the field of machine learning that insist on building scaled-down tools while incorporating the feedback of communities and individuals who would be the end users (Vidgen & Derczynski, 2020; Waseem, 2016). For this, we had been in conversations with community influencers, members of community-based organizations, on on-ground activists, who encountered instances of online hate and violence. Such an approach necessitated an interdisciplinary team. The larger team included designers, activists, data scientists and social scientists.

Contrary to dogmatic disciplines existing in silos, against which a certain notion of interdisciplinarity emerged in the 20th century, both of us had received interdisciplinary training to some extent. One of the authors, while being a computer scientist, had been introduced to science and technology studies (STS) and the specific postcolonial predicaments that inform the field of STS in India as well as policy studies as part of their graduation and post-graduation courses. The other author had traversed the fields of English literature, gender studies, and cultural studies with a specialized interest in feminist techno-science studies, STS and continental philosophy, more broadly.

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1 The first iteration of the tool was developed in partnership between two organizations based out of India, The Centre for Internet and Society and Tattle Civic Tech. One of the authors is a founder of the second organization, Tattle Civic Tech, while the other author was recruited in 2021 by the Centre for Internet and Society to work on this project as a full-time researcher. The project was privately funded by Omidyar India Network. The tool was launched in 2022 and is available here: https://uli.tattle.co.in/

The paper builds from observations on interdisciplinarity exchanged by the two of us. For this paper, one of the authors had put down their thoughts as a reflective diary entry which was then built upon by the other author to write this paper.

The paper is divided into four sections. The second section situates this work within the existing literature on interdisciplinarity, noting some dominant tendencies vis-à-vis interdisciplinarity that posits a unity of science as well as a linear time. To contest this position, we foreground a notion of 'intercurrence' (i.e., in between, an occurrence within an occurrence) as a useful image to perceive interdisciplinarity and interdisciplinary praxis. Borrowing from Orren & Skowronek's (1996) notion of intercurrence, we argue that at any given point, an interdisciplinary team navigates multiple, yet simultaneously occurring temporal dimensions of differently disciplined bodies. An awareness of these multiple temporalities adds another dimension to thinking about conflicts and possibilities emerging from interdisciplinary practices. In the section 3, we present three incongruent temporalities, in the form of vignettes, that informed the praxis of three differently disciplined bodies: a computer scientist, a social scientist and an activist. These three incongruent temporalities help foreground the milieu in which ideas are received, embraced, rejected, or worked upon in an interdisciplinary team. The paper concludes with section 4 that brings together different strands of the paper and presents an interdisciplinary praxis that can remain open to unexpected outcomes.

However, before we get into the main argument in sections 2 and 3, we briefly discuss below the interdisciplinary approaches that informed the ML project as well as our relationship to disciplinarity that, borrowing from Marcovich & Shinn (2011), we describe as 'elastic' and is unique to early career researchers in the 21st century.

1.1 The ML project and its interdisciplinary dynamics

The ML project on which the paper is based is part of a disciplinary assemblage where a certain regime of interdisciplinarity is already established as an acceptable approach. It borrows insights from diverse fields such as data science, machine learning, gender/women studies, and media and communication studies. At the core, however, as a project to build a user-facing plug-in, it came closest to the field of Human-Computer interaction that relies extensively on interdisciplinary approaches (to build "interactive software that can be used efficiently, effectively, safely and with satisfaction" [Hartson, 1998]). The field has witnessed multiple calls to incorporate and embrace elements from humanities, arts**,** computer science, social science, design, literary theory, psychology, cultural studies, critical theory and phenomenology (Bardzell & Bardzell, 2015; Coyne, 2001; Dourish et al., 2004; Hartson, 1998; Mateas, 2001; McCarthy & Wright, 2004; Winograd & Flores, 1986). It has also had internal debates vis-à-vis further stabilization and consolidation of the field into a discipline (Liu et al., 2014) to characterizing HCI as an inter-discipline, between disciplines, that provokes, invents, reflects (Blackwell, 2015) and often prides itself on a welcoming environment. Given this acceptance of the interdisciplinary, networked nature of the field, the conversation often revolves around the need to improve discussions between individuals from different disciplinary upbringing (Niess & Wozniak, 2020). The discussion that follows aims to complement this characteristic of the field while also being relevant to other fields requiring interdisciplinary approaches.

Since the authors have had strong training in interdisciplinarity, it should be pointed out that we have experienced disciplinarity as, what Marcovich & Shinn (2011) calls, 'elastic'. These hints towards different disciplinary concerns in the contemporary where the imagination of disciplines in the 21st century is no longer one of the opaque silos but is marked by elasticity that is defined as "dilation in the range of instruments, new materials, and the scope of questions asked in the discipline and their interconnections with other disciplines" (2011, p. 583).

We write this account from the viewpoint of a generation, of early career researchers in the 21st century, that is born within the "triple helix" or military-industry-state model of interdisciplinarity

(Fuller, 2017) rather than those that saw, predominantly during the 1960s, the epistemological potentials within interdisciplinary approaches to escape disciplinary silos. This is a perspective that is often lacking in the literature on interdisciplinarity (Dooling et al., 2017). This position allows us to foreground the heterogeneity of disciplines and be acutely aware of interdisciplinarity's failures.

II INTERDISCIPLINARY AND INTERCURRENCE

Turner (2017) traces the emergence of disciplines to the history of university systems in medieval Europe and the US that were then becoming new centres to learn the law, medicine, and theology. Within these new centres of learning, disciplining meant "the protection of the dogma" (ibid.). This history informed the subsequent 19th-century criticism of disciplinarity that foregrounded: 1) the ideal of the unity of knowledge, 2) the exclusion of "educationally significant topics" for the sake of disciplinary concerns (as pointed out in the 20th century) and finally 3) the problematic of "practical value", a response spearheaded by the Rockefeller philanthropic interests in the 1920s and 1930s (ibid.). This assemblage – of disciplinary dogmatism, educationally significant courses, and a funded interest in promoting practical values – is important to note for this paper and the making of the ML project upon which the arguments of this paper hinge.

An extensive discussion already exists in the field to mark the boundaries of inter-, multi-, trans-, and pluri-disciplinarity where different scholars underline varied relations such as juxtaposition, synthesis, integration, transcendence, etc. between disciplines. The issue to date has been "in part one of the definitions" (Frodeman, 2017) where interdisciplinarity et al. have "functioned as boundary objects that have had different meanings at different times". Contrary to this and following Schmid et al. (2011), we do not aim to classify or define interdisciplinarity. While we agree with Klein (2017) that typologies are political, we use 'interdisciplinarity' as a portmanteau word for all "more-than-disciplinary approaches to knowledge". Most of the discussions on interdisciplinarity approach the problems of integration, juxtaposition, and transformation of disciplines as an epistemic task (Frodeman, 2017) that focuses its attention on understanding how the relationship between disciplines ought to be arranged to respond to the challenges of the 21st century. While on one hand, these preoccupations impose a linear time upon all disciplines via which each is called upon to respond to the problem as framed from within this linear time, on the other hand, it gives way to a series of abstract methodological principles which do not help teams *in media res* (ibid.) understand the source of their conflict.

Enough ink has been spilt on explaining how interdisciplinarity can guard against the dogma of disciplines as it centres translation, problem-solving, and transfer of knowledge from universities to rest of the society. These discussions, however, fail to account for the actual action of interdisciplinarity *in media res*, especially in asking what happens when communication between different actors constituting an interdisciplinary team fails. In trying to trace these moments of failure, the paper foregrounds a certain heterogeneity immanent to disciplines. While certain practices of interdisciplinarity posit a unity of science (Mäki, 2016) and perceive disciplines as existing in silos in need of reintegration, we concern ourselves with what Schmid et al. calls, "*une sorte d'épaisseur entre les disciplines*", i.e., the thickness of disciplines, a heterogeneity that introduces breaks into supposedly (intellectual) continuities.

The decision to stay with the predicament, with which the paper opens, continues to inform the approach to interdisciplinarity that is central to this paper. Instead of treating problems as aberrations that can be resolved by mapping/calling forth an ideal practice of interdisciplinarity, we aim to use these predicaments to articulate a different image of interdisciplinarity, one that accounts for its montage characteristic. To do so, the simultaneity of temporal concerns/conflicts is brought to the forefront as another dimension informing different epistemological positions. To point out these temporal dimensions as being central to conflicts between different disciplines is to suggest that these conflicts cannot always be resolved, blended, or integrated. Rather than ask, what is interdisciplinarity or how to achieve more or less interdisciplinarity, a concern that predominates

the field, the paper aims to map the dynamics between different disciplines in interdisciplinary practices.

We find Orren & Skowronek's (1996) concept of 'intercurrence', simultaneously occurring temporalities, useful to map the aforementioned question. Orren & Skowronek (1996) developed 'intercurrence' to interrogate the concept of "'political system' – an integrated whole in which institutions work together, more or less well, to meet demands from their environment" (p. 112). Contrary to this notion of the political system, they posit a "political universe organized and activated by intercurrence", which is described as "engagements throughout the polity of the different norms embedded in institutions, the terms of control contested, more or less intensely, in the ongoing push and pull among them" (p. 112). The concept of intercurrence is meant to interrogate "the wholeness of systems and the homeostatic character of change".

Albeit developed in the context of political institutions, we find the concept useful with regard to disciplines as well. First, their definition of political institutions brings to light the "non-simultaneity" of disciplinary origins, and "the other directedness" of disciplines whereby they seek to explain, represent, intervene, or capture worlds that are "outside their own sphere". Second, this concept also interrogates the will to install order within the field of interdisciplinarity, when the practice itself is rife with multiple temporalities that cannot be ordered through simple narratives of integration, blending, and linking (See Klein, 2017). Understanding interdisciplinarity through intercurrence allows one to perceive the simultaneity of incongruous approaches of different disciplines. This incongruity between the simultaneously occurring epistemic approaches and their specific history and embeddedness in the political economy of knowledge, i.e., intercurrence, "becomes the medium of change through time" rather than transcendence of disciplines, integration of multiple viewpoints, or other similar tropes that aim to characterize interdisciplinary practices.

While there's not much discussion vis-à-vis time, temporality and interdisciplinary research, these concerns appear in discussions on 'engaged scholarship' that integrates academic and non-academic expertise to develop community-facing products. Engaged scholarships require long-term investments and also "bring together organizations that experience time differently and operate in different temporalities" (Barbour et al., 2017). However, within this literature time is often treated as a resource to be invested, spent, or managed and where the experience of different temporalities by human actors can be "knit together" to "manage the investments of time" (2017, p. 366).

Though a notion of time as a resource does impinge upon the funded projects and how differently disciplined bodies are made to coordinate and work together, for the purpose of this paper, however, we are interested in delineating temporal concerns vis-à-vis disciplines and their epistemic orientations. If each discipline has different epistemological orientations, notions of temporality are central to these differences and how each discipline evaluates ways of knowing and being i.e., how to know the world and what to do. A discipline's temporal concerns also inform what kind of relation each discipline aims to build with larger socio-political processes. As Orren & Skowronek (1996) point out while developing the concept of intercurrence, each institution (a definition of which can also be extended to disciplines) develops in the "fullness of time" which is used to point out that institutions do not "float "in" time; time is a construct of the intercurrence of institutions". To further explain the concept of time offered by Orren & Skowronek (1996).

> "In place of the conventional picture of time as one wide stream surrounding institutional action and deflected by it, intercurrence shows time filled up, sculpted, so to speak, by the different historical trajectories that institutions bring into play … time is 'told' at every moment by its institutional content".

The paper contends that a similar view of intercurrence, of disciplines developing in "fullness of time", where time is filled up, told, and sculpted also helps explain the way disciplines converge and diverge in interdisciplinary settings. Complementing this understanding of intercurrence, we

also find Grosz's conceptualization of time and temporality relevant. Very briefly, borrowing from these sources, we understand time as an active force, that brings objects, bodies, and matter into existence. Since, in this paper, we are concerned not just with disciplines but also differently disciplined bodies working together on a problem, we also find Cantó-Milà & Seebach's (2015) proposition that our relations with each other are "based on a reflected or non-reflected assumption that there will be a future" which points towards an individual's temporal dimension as necessary to invent, discover, acquire, defend one's own place in social relations that occupy us.

This notion of time and temporality as filling up institutions, disciplines and bodies impinges upon how the coordinating task is experienced, how hierarchies between different disciplines that each body sustains within itself are defended and navigated, and how a past, present and future are imagined by each differently disciplined body participating in the making of a tool. The fragmentary vignettes presented below bring forth how a certain notion of temporality is crucial to how different ideas are received, different disciplines are homogenized or ghettoized, and ideas are embraced, rejected, or worked upon.

In the following section, this discussion on interdisciplinarity as intercurrence is interspersed by mapping three different temporalities that informed three differently disciplined bodies in the team: the activist-researcher, the computer scientist, and the social scientist. Finally, these three simultaneously occurring, incongruent temporalities mediated through three differently disciplined bodies are sutured together by the homogenizing funding cycle that imposes a clock time on the project and the three actors.

III THE THREE INCONGRUENT TEMPORALITIES

Vignette 1: "The ghost of two cultures"

We started working on the project remotely in June 2021. At the start of the project, when the members were just introducing each other and getting a sense of how the work will be distributed between the two organizations collaborating on the ML tool – the Centre for Internet and Society (CIS) and Tattle, a ghost of "two cultures" made itself visible where the members of Tattle Civic Tech, an organization that builds data sets and describes itself as a community of "technologists, researchers, journalists and artists", was homogenized as forming "the technical arm" of the project.

This label was quickly refuted by one of the authors of this paper, trained in computer science, a co-founder of Tattle, and strictly speaking, "is not an engineer on the team". This refutation was an attempt to bury the ghosts of the past, that distinguished between the scientific, the technical, the cultural and the social. It was also an attempt to assert the elasticity of current disciplinary regimes in the contemporary. On the contrary, this categorization of Tattle as the "technical arm" by a social scientist, trained in STS, reiterated the historical burden of the discipline that had established itself in the past by opening the scientific, and the technical to the quandaries of the social.

This homogenization and its immediate refutation hinted at the ways in which different disciplines order their own past, present and future. On one hand, the team member disciplined in STS/FTS still existed within a temporal order where the desired future of blurring disciplinary boundaries between the social, the technical, and the scientific had not materialized as concretely as it was envisioned. On the other hand, the team member traversing the technical, the political (of policy-making and building community-facing tools) was already charting a different temporal order of porous, elastic, and dynamic disciplines. The success or failure of this porosity as is claimed by a discipline at a particular moment in time, however, is another concern. What is important to note here is that for one body a certain disciplinary future was not yet, while for another a different disciplinary future was already in the making.

Vignette 2: "I am an applied researcher"

Another team member, a media and communication researcher who was also an activist and a peer supporter working for the LGBTQA+ community in India for over a decade joined the team after four months of starting the project. While earlier, we were just navigating two temporal intercurrences as described above, of a disciplinary future not yet and a disciplinary future already in the making, with the entry of the fourth member, another temporal force was introduced. The fourth member would often describe themselves as "an applied researcher", an identity that helped them distinguish themselves from other members of the team – the computer scientists and the social scientists. According to this statement, the other two members were presumably only interested in research for research's sake without considering its practical implications or the communities for whom the ML tool was being built.

This statement, *"I am an applied researcher",* was productive of a certain kind of disposition towards the world. It helped situate the tool and its immediate utility in the present. It gave precedence to user experience over and above anything else and helped link tool development with the immediate need of the individuals who could use it in an immediate future.

The statement, however, was also responding to the perceivable disciplinary hierarchies where the other two disciplines were seen as occupying the top of the academic pyramid, the knowledge infrastructure. The presumable homogenization of a computer scientist and a social scientist as researchers who are not doing "applied research" (the meaning of which will be contested and refuted by each discipline) can be seen as an attempt to reorganize and redistribute the power between the three differently disciplined bodies where a body identifying as an activist asserts its value by repeating its proximity to the 'real' world and real 'concerns'.

The disciplinary concerns were dismissed as abstract, with no "real" world implications. The temporality of political immediacy or 'real' concerns was perceived as incongruent with the assumed temporalities of the other two disciplines that were only interested in research for research's sake. The classification of the other two bodies as "not-applied researchers" who were only interested in building detached knowledge systems was a symptom wherein a certain temporality, of immediacy or the here and now, was posited as a defence against a perceived disciplinary hierarchy.

A non-recognition of intercurrence, simultaneously occurring temporalities, that order and inform different disciplines working together in an interdisciplinary team produce such moments of homogenization. The evocation of other members as part of a homogenous 'technical' team, or "not-applied researchers" can be perceived as instances when the intercurrent nature of disciplines is misrecognized.

The encompassing logic of algorithms in the present

The all-encompassing logic of computers, data, code, algorithms, and information in the contemporary (Kitchin & Dodge, 2011) was another occurrence that was intersecting with these three disciplinary intercurrences. This over-encompassing logic that frames the present moment, crisscrossed the three differently disciplined bodies differently. As illustrated above via vignettes 1 and 2, the two bodies of the activist and the social scientist refuted this disciplinary hierarchy through an act of homogenization. The computer scientist, on the other hand, responded differently. The following diary entry is a case in point:

> Vignette 3: "I think I do a lot of explanation of the machine learning process but there have definitely been discussions where I feel like it would be better if everyone read up on it independently. And when I have lost patience, I have feared that I am reinforcing the trope of engineers not valuing or being considerate of other perspectives (strictly speaking I am not an engineer on the team)… I also don't want people to stop asking questions … But sometimes it feels like we spend time going over what I think are basics that would be better spent elsewhere."

While we agree that the burden of translation of one's own specialized viewpoints ought to have been felt by all team members and that each, at some point or other, would have been left with a feeling of not being understood, the team discussions (as the above diary entry suggests) had often revolved around understanding the logic of machine learning, its limits, and possibilities. To grasp how this all-encompassing logic of computers, data, code, algorithms, and information in the contemporary, intersected and ordered other disciplinary occurrences, it is important to juxtapose the above vignette with another vignette put down by one of the authors, the social scientist on the team, while reflecting upon the experience of building the tool:

> Vignette 4: I had only recently joined the team and was just one month into the literature around content moderation. Armed with the theoretical approaches to decolonial, feminist AI, I was demanding that we discuss the 'narrative' that we want our tool to weave. Would it be possible to code another narrative in this tool that can account for the complexities of postcolonial condition, locate a different causality to gendered, sexual violence that is other than an abstract, hollow notion of age-old patriarchy and its violent manifestations? This discussion, a team member heuristically suggested, would unleash a whirlpool. We had a timeline, we were accountable to our funders, and we cannot afford to get lost.

This vignette documents a research angle that was not explicitly adopted in the making of the tool. This is to say that the praxis of interdisciplinarity was mobilized to address a problem, a predefined objective – to build a ML tool to mitigate online gender-based violence – which was merely passed between different disciplines without giving way to a new logic of interdisciplinarity (Schmid et al., 2011). This is to say that the praxis of interdisciplinarity was mobilized to address a problem, a predefined objective – to build an ML tool to mitigate online gender-based violence. Each discipline was called upon to solve, think with and work with this objective without giving way to a new logic of interdisciplinarity (Schmid et al., 2011). While each team member was stuck with the signifier of oGBV and ML, the everyday discussions reflected the myriad interpretations that different disciplines could bring to the table and contest the dominant meaning of these signifiers. The team reflected on questions such as what is oGBV, what kind of abuse on social media should be classified as oGBV and how should one expand the definition to include the intersectional nature of the abuse, or whose perspective should be privileged when defining the problem. These were difficult questions to navigate across different disciplines that had their own intercurrent histories of thinking with these two signifiers. While navigating these productive contestations, and owing to the discursive stickiness of these signifiers, questions such as what the discursive relevance of this signifier is, does it help capture the problem, how will the signifier influence the design of the ML tool, or should the ML tool be developed at all, etc. ended up being foreclosed from the start.

A detour is necessary to grasp the essence of the last point that is being made here. An important insight from the field of women/gender studies influenced by poststructuralist approaches is to mark the constructed and productive nature of the problem, of how a phenomenon and the way it is framed is not given out there but constructed through a nexus of knowledge/power. Borrowing from this insight, the global feminist discourse of violence against women (VAW) faced a certain political challenge from postcolonial feminist approaches. Postcolonial approaches pointed out the confluence between the problematic of VAW discourse and the colonial and imperial projects that frame territory and its population as "backward", "traditional", and patriarchal to justify economic and military aggressions (Abu-Lughod, 2002; Mohanty, 2003; Peroni, 2016; Razack, 2021; Terman, 2016). The trope of gendered violence through which the presumable backwardness of a population is stabilized becomes central to justifying this aggression. Following a similar narrative of VAW, the problem of online gendered violence is not given but is produced within a certain knowledge/power nexus. To ignore the discursive and productive nature of a phenomenon is to choose between one temporal order among the intercurrent, simultaneously occurring, conflicting temporal dimensions informing that phenomenon of oGBV/VAW at any given point. The liberal feminist temporal order merely extends the problem of oGBV by mapping how it manifests for different individuals and communities without interrogating how and what purpose would such a

framing serve. In contrast, the postcolonial temporal order would refute the way in which the problem of online gendered violence is framed, what causal links are built and how the phenomenon is made to manifest in the present.

The burden of translation, thus, was heavier on the computer scientist because the initial decision, "to not get lost in the whirlpool", mandated that others travel across time to align with the mandate of the project to build a ML tool to mitigate online-gender-based violence. With this decision, the problem of oGBV and how it is framed was predefined and taken for granted. Instead, what was under contestation was the ML tool, how it ought to be built, its limitations and its possibilities.

In the contemporary, given the all-encompassing logic of algorithms and ML, its making took precedence over other concerns that quite plausibly could have unleashed a temporal whirlpool. However, this temporal whirlpool could also have unleashed, what Schmid et al. (2011) refer to as a new logic of interdisciplinarity or a new interdisciplinary research object/objective that is formed from within these intercurrences. Similarly, the burden of translation could have weighed heavily upon another body if the disciplinary fields and the hierarchies between them were configured differently.

IV CONCLUSION: WHAT ARE THE IMPLICATIONS OF POINTING OUT THESE INCONGRUENT TIMELINES THAT SITUATE DIFFERENT DISCIPLINES?

As would be obvious from the discussion, the moments of homogenization – the "technical team" or "not applied researchers", described through vignettes 1 and 2, do not merely point towards an error that can be corrected by pointing out the elasticity of the discipline or a misplaced stereotyped. That is, social scientists, given their epistemological and ontological dispositions to the world, would continue to seek a future that is different from what we already have in the present. This future of a social scientist, that is sceptical of the here and now, of the immediacy of the politics that privileges certain modes of being in and of the present will continue to conflict with the subject position of an activist who is immersed in the immediacies of the present and the possibilities that it offers. Similarly, to go back to the diary entry with which we began, a computer scientist will not find much merit in the question: "why must this ship move at all?" Contrary to the neat, sanitized and at times celebratory accounts of blending, integrating, juxtaposing, or transcending disciplines ensuing from presumably sovereign, cognitive capacities of academics (Fuller, 2017), the notion of intercurrence points towards simultaneously occurring temporalities as central to incongruencies that inform interdisciplinary practices.

As Orren & Skowronek (1996) suggest, the intercurrent nature of institutions and disciplines is not a pathological condition. To point out these temporal dimensions is not to mark the ways in which the incongruent can be made congruent but to point out that the interdisciplinary approaches appear in "fullness of time" where we are not just dealing with individuals who think, see, or perceive differently. It is often assumed that this difference can be bridged through regular discussions and yet the perverse desire keeps recurring (that should have come up now and then for every team member involved in the project): "Wouldn't it be easier if everyone could just use the same tools for communication and documentation? X-D".

Rather, it is to point towards the temporal force of each differently disciplined body that brings with it an entire temporal dimension. As should be obvious, these dimensions are in conflict with each other while being vulnerable to homogenization within an assemblage that favours clock time, project deadlines and results that are recognizable and mandate "specifying in advance what discoveries will be made" (Blackwell, 2015). However, if innovation is that which is unexpected, surprising, or serendipitous then an awareness, among all the team members, of these multiple temporal dimensions occurring simultaneously in a project can help achieve unexpected outcomes that can concretize uncharted past, present and future. The knowledge of the fact that we all are already occupying different timelines, the future being given to me in the present is not necessarily

a future being imagined by another, might help trace the contours of a liveable world, a world that is different from what it already is.

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